Applicant's Name_____

POWER PLANT INSTALLATIONS

Reference FAA Order 8110.37, Appendix 2, Chart B

DER APPLICATION EVALUATION TECHNICAL CRITERIA

Delegated Functions & Authorized Areas

? Applicant indicates requested area(s) of delegation and attaches supporting data to establish technical expertise and experience.
? Advisor (**Adv**) evaluates requested area(s), recommends area(s) to Evaluation Panel (**EP**). (Y=YES; N=NO) and provides rationale.
? Evaluation Panel evaluates area(s) recommended by Advisor, marks **EP** column. (Y=YES; N=NO) and provides rationale.

DER APPLICANT USE ONLY		*FAA USE ONLY*	
Requested Areas	**ENGINE INSTALLATION**	**Adv**	**EP**
	1A Airplane Turbine Engine		
	1B Airplane Piston Engine		
	1C Rotorcraft Turbine Engine		
	1D Rotorcraft Piston Engine		
	1E Auxiliary Power Unit (APU)		
	1F Special (Specify)		
Requested Areas	**FUEL & OIL**	**Adv**	**EP**
	2A Airplane Turbine Engine		
	2B Airplane Piston Engine		
	2C Rotorcraft Turbine Engine		
	2D Rotorcraft Piston Engine		
	2E Auxiliary Power Unit (APU)		
	2F Special (Specify)		
Requested Areas	**INDUCTION / EXHAUST SYS.**	**Adv**	**EP**
	3A Airplane Turbine Engine		
	3B Airplane Piston Engine		
	3C Rotorcraft Turbine Engine		
	3D Rotorcraft Piston Engine		
	3E Auxiliary Power Unit (APU)		
	3F Special (Specify)		
Requested Areas	**THRUST REVERSERS**	**Adv**	**EP**
	4A Airplane Turbine Engine		
	4B Airplane Piston Engine		
	4F Special (Specify)		
Requested Areas	**FIRE PROTECTION**	**Adv**	**EP**
	5A Airplane Turbine Engine		
	5B Airplane Piston Engine		
	5C Rotorcraft Turbine Engine		
	5D Rotorcraft Piston Engine		
	5E Auxiliary Power Unit (APU)		
	5F Special (Specify)		

DER APPLICANT USE ONLY		*FAA USE ONLY*	
Requested Areas	**ICE PROTECTION**	**Adv**	**EP**
	6A Airplane Turbine Engine		
	6B Airplane Piston Engine		
	6C Rotorcraft Turbine Engine		
	6D Rotorcraft Piston Engine		
	6E Auxiliary Power Unit (APU)		
	6F Special (Specify)		
Requested Areas	**COOLING**	**Adv**	**EP**
	7A Airplane Turbine Engine		
	7B Airplane Piston Engine		
	7C Rotorcraft Turbine Engine		
	7D Rotorcraft Piston Engine		
	7E Auxiliary Power Unit (APU)		
	7F Special (Specify)		
Requested Areas	**ENGINE PERFORMANCE/OPERATIONS**	**Adv**	**EP**
	8A Airplane Turbine Engine		
	8B Airplane Piston Engine		
	8C Rotorcraft Turbine Engine		
	8D Rotorcraft Piston Engine		
	8E Auxiliary Power Unit (APU)		
	8F Special (Specify)		
Requested Areas	**INDICATING SYSTEMS**	**Adv**	**EP**
	9A Airplane Turbine Engine		
	9B Airplane Piston Engine		
	9C Rotorcraft Turbine Engine		
	9D Rotorcraft Piston Engine		
	9E Auxiliary Power Unit (APU)		
	9F Special (Specify)		
Requested Areas	**LIGHTNING / HIRF PROTECTION**	**Adv**	**EP**
	10A Airplane Turbine Engine		
	10B Airplane Piston Engine		
	10C Rotorcraft Turbine Engine		
	10D Rotorcraft Piston Engine		
	10E Auxiliary Power Unit (APU)		

	10F Special (Specify)		

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POWER PLANT INSTALLATIONS

Reference FAA Order 8110.37, Appendix 2, Chart B

Requested Areas	SOFTWARE	Adv	EP
	11A Airplane Turbine Engine		
	11B Airplane Piston Engine		
	11C Rotorcraft Turbine Engine		
	11D Rotorcraft Piston Engine		
	11E Auxiliary Power Unit (APU)		
	11F Special (Specify)		

Additional requirements for a DER with a delegation of Software Approval:

Circle One

Yes No (a) Comprehensive familiarity with, and understanding of, RTCA Document DO-178 (applicable revision), Software Considerations in Airborne Systems and Equipment Certification.

Yes No (b) Familiarity with the systems safety assessment process, specifically, those portions which establish the software criticality levels.

Yes No (c) A demonstrated knowledge of the rationale for, and the significance of, each stage in the software development process, as well as its supporting standards, procedures, and documentation. The DER should be able to identify the critical aspects and contents of each of the documents mentioned in DO-178.

Yes No (d) Experience gained from participation in some technically responsible capacity over a complete software development program life cycle. This qualification may be satisfied by an aggregate over several different software development programs.

Yes No (e) Experience interacting with all phases of software development and testing processes addressed by DO-178, including utilization of the associated configuration and quality control procedures. This experience should include significant responsible involvement in several of those phases. When assessing an applicant's capabilities for making a knowledgeable finding of compliance, experience obtained in the requirements development or testing phases may, for example, be weighted more heavily than that obtained in the detail design or coding phases.

Yes No (f) Fluency in at least one high-level and one assembly-level programming language and familiarity with typical support software used in a software development process. Familiarity with typical software tools available to facilitate the development, documentation, and consistency-checking processes is highly desirable.

Yes No (g) Demonstrated knowledge of the sources of software anomalies, the relative merits of the types of testing procedures which are available to protect against them, and the characteristics of a thorough test program.

Yes No (h) Familiarity with the aspects of computing peculiar to real-time avionics systems, such as the use of interrupts, multi-tasking, software reentrancy, etc. This should include an appreciation of the types of analysis and testing necessary to ensure the integrity of these mechanisms.

Yes No (i) An understanding of the techniques which may be employed to reduce software criticality levels, such as system architecture, version programming, and partitioning. This should include the ability to assess the adequacy of a proposed technique relative to the integrity credit desired.

Yes No (j) Knowledge of hardware characteristics such as input/output schemes, memory organization and multi-port access, communication-bus protocols, and processor architecture, all of which have an impact on the software interface and the potential for the creation of anomalies.

Applicant's Name_____

POWER PLANT INSTALLATIONS

Reference FAA Order 8110.37, Appendix 2, Chart B

DER APPLICANT USE ONLY		*FAA USE ONLY*	
Requested Areas	**CONTROL SYSTEM - ELECTRONIC**	**Adv**	**EP**
	12A Airplane Turbine Engine		
	12B Airplane Piston Engine		
	12C Rotorcraft Turbine Engine		
	12D Rotorcraft Piston Engine		
	12E Auxiliary Power Unit (APU)		
	12F Special (Specify)		
Requested Areas	**CONTROL SYSTEM - MECHANICAL**	**Adv**	**EP**
	13A Airplane Turbine Engine		
	13B Airplane Piston Engine		
	13C Rotorcraft Turbine Engine		
	13D Rotorcraft Piston Engine		
	13E Auxiliary Power Unit (APU)		
	13F Special (Specify)		
Requested Areas	**EMISSIONS**	**Adv**	**EP**
	14A Airplane Turbine Engine		
	14B Airplane Piston Engine		
	14C Rotorcraft Turbine Engine		
	14D Rotorcraft Piston Engine		
	14F Special (Specify)		
Requested Areas	**VIBRATION - ENGINE, PROP., OR DRIVE SYSTEM**	**Adv**	**EP**
	15A Airplane Turbine Engine		
	15B Airplane Piston Engine		
	15C Rotorcraft Turbine Engine		
	15D Rotorcraft Piston Engine		
	15F Special (Specify)		

DER APPLICANT USE ONLY		*FAA USE ONLY*	
Requested Areas	**PROPELLER**	**Adv**	**EP**
	16A Airplane Turbine Engine		
	16B Airplane Piston Engine		
	16F Special (Specify)		
Requested Areas	**DRIVE SYSTEM**	**Adv**	**EP**
	17A Airplane Turbine Engine		
	17B Airplane Piston Engine		
	17C Rotorcraft Turbine Engine		
	17D Rotorcraft Piston Engine		
	17F Special (Specify)		
Requested Areas	**TRANSMISSIONS**	**Adv**	**EP**
	18C Rotorcraft Turbine Engine		
	18D Rotorcraft Piston Engine		
	18F Special (Specify)		
Requested Areas	**SAFETY ANALYSIS**	**Adv**	**EP**
	19A Airplane Turbine Engine		
	19B Airplane Piston Engine		
	19C Rotorcraft Turbine Engine		
	19D Rotorcraft Piston Engine		
	19E Auxiliary Power Unit (APU)		
	19F Special (Specify)		
Requested Areas	**SERVICE DOCUMENTS**	**Adv**	**EP**
	20A Airplane Turbine Engine		
	20B Airplane Piston Engine		
	20C Rotorcraft Turbine Engine		
	20D Rotorcraft Piston Engine		
	20E Auxiliary Power Unit (APU)		
	20F Special (Specify)		